



*Element Materials Technology - Fort Wayne*  
328 Ley Rd.  
Fort Wayne, IN 46825  
TEL: (260) 424-1622 FAX: (260) 424-9124  
Website: [www.element.com](http://www.element.com)

March 18, 2022

Henry Padilla  
East Chicago Sanitary District  
5201 Indianapolis Blvd  
East Chicago, IN 46312  
TEL: (219) 391-8466  
FAX: (219) 391-8254

RE: S-901

Order No.: 22030316

Dear Henry Padilla:

Element Materials Technology - Fort Wayne received 2 sample(s) on 3/8/2022 for the analyses presented in the following report.

In accordance with your instructions, a laboratory of Element Materials Technology Fort Wayne LLC either conducted or subcontracted these analyses. Subcontracted analyses will be identified in an accompanying case narrative and any associated report(s) will be attached in full. Unless otherwise noted in the case narrative, all analyses were conducted using approved methodologies. Reported results relate only to the items tested.

Estimated uncertainty is available upon request. This report shall not be reproduced, except in full, without the written approval of the laboratory.

If you have any questions regarding these test results, please feel free to call.

Sincerely,

A handwritten signature in black ink, appearing to read 'Megan Krauskopf'.

Megan Krauskopf  
Project Manager  
328 Ley Rd.  
Fort Wayne, IN 46825



*Element Materials Technology - Fort Wayne*  
328 Ley Rd.  
Fort Wayne, IN 46825  
TEL: (260) 424-1622 FAX: (260) 424-9124  
Website: [www.element.com](http://www.element.com)

## Case Narrative

WO#: 22030316

Date: 3/18/2022

---

**CLIENT:** East Chicago Sanitary District

**Project:** S-901

---

The Available Cyanide testing was subcontracted to Eurofins/Test America Pittsburgh PA. Their report is attached in its entirety.

---

Original



Element Materials Technology - Fort Wayne  
328 Ley Rd.  
Fort Wayne, IN 46825  
TEL: (260) 424-1622 FAX: (260) 424-9124  
Website: www.element.com

## Analytical Report

(wastewater)

WO#: 22030316

Date Reported 3/18/2022

**CLIENT:** East Chicago Sanitary District **Collection Date:** 3/7/2022 8:58:00 AM  
**Project:** S-901  
**Lab ID:** 22030316-001 **Matrix:** WASTEWATER  
**Client Sample ID** S-901 Grab  
**Sample Location:**

Analyses	Result	RL	Qual	Units	DF	PL	Date Analyzed
<b>OIL AND GREASE, TOTAL</b>					<b>E1664</b>		Analyst: <b>SEK</b>
Oil & Grease, Total	22.5	3.0		mg/L	1	50.0	3/9/2022 10:30:00 AM
<b>PHENOLICS IN WASTEWATER</b>					<b>E420.1</b>		Analyst: <b>RXW</b>
Phenolics, Total Recoverable	0.253	0.125		mg/L	5		3/10/2022 4:05:00 PM
<b>SV COMPOUNDS FOR CATEGORICAL RQTS</b>					<b>E625.1</b>		Analyst: <b>SKW</b>
Bis(2-ethylhexyl)phthalate	< 100	100		µg/L	10		3/13/2022 9:35:00 PM

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	M	Manual Integration used to determine area response
	ND	Not Detected at the Reporting Limit	PL	Permit Limit
	PQL	Practical Quantitation Limit	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		



Element Materials Technology - Fort Wayne  
328 Ley Rd.  
Fort Wayne, IN 46825  
TEL: (260) 424-1622 FAX: (260) 424-9124  
Website: www.element.com

## Analytical Report

(wastewater)

WO#: 22030316

Date Reported 3/18/2022

**CLIENT:** East Chicago Sanitary District **Collection Date:** 3/7/2022 8:58:00 AM  
**Project:** S-901  
**Lab ID:** 22030316-002 **Matrix:** WASTEWATER  
**Client Sample ID** S-901 Composite  
**Sample Location:**

Analyses	Result	RL	Qual	Units	DF	PL	Date Analyzed
<b>FLUORIDE</b>					<b>E300.0</b>		Analyst: HNN
Fluoride	5.9	1.0	*	mg/L	10	2.9	3/9/2022 6:47:00 PM
<b>CHEMICAL OXYGEN DEMAND</b>					<b>M5220 D</b>		Analyst: ASP
Chemical Oxygen Demand	1,350	30.0		mg/L	3		3/10/2022 9:30:00 AM
<b>AMMONIA AS N</b>					<b>E350.1</b>		Analyst: RXW
Nitrogen, Ammonia (As N)	53.2	1.00		mg/L	10	77.0	3/11/2022 11:26:00 AM
<b>TOTAL PHOSPHORUS</b>					<b>M4500-P F</b>		Analyst: ANS
Total Phosphorus	0.291	0.100		mg/L	1	5.50	3/10/2022 4:07:06 PM
<b>TOTAL SUSPENDED SOLIDS</b>					<b>M2540 D</b>		Analyst: ASP
Suspended Solids (Residue, Non-Filterable)	92	40		mg/L	1		3/9/2022 3:06:00 PM
<b>MERCURY</b>					<b>E245.1</b>		Analyst: FJR
Mercury	0.00025	0.00010		mg/L	1		3/17/2022 9:39:09 AM
<b>METALS IN WATER BY ICP-MS, TOTAL</b>					<b>E200.8</b>		Analyst: FJR
Arsenic	0.00883	0.00020		mg/L	1	0.500	3/10/2022 11:59:35 AM
Chromium	0.00343	0.00040		mg/L	1	0.282	3/10/2022 11:59:35 AM
Copper	0.00551	0.00020		mg/L	1	0.301	3/10/2022 11:59:35 AM
Lead	0.00095	0.00020		mg/L	1	0.224	3/10/2022 11:59:35 AM
Molybdenum	0.0438	0.00020		mg/L	1	0.200	3/10/2022 11:59:35 AM
Nickel	0.0144	0.00100		mg/L	1	0.390	3/10/2022 11:59:35 AM
Zinc	0.102	0.00040		mg/L	1	1.48	3/10/2022 11:59:35 AM

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitation Limit
- S Spike Recovery outside accepted recovery limits

- H Holding times for preparation or analysis exceeded
- M Manual Integration used to determine area response
- PL Permit Limit
- RL Reporting Detection Limit

## ANALYTICAL REPORT

Eurofins Pittsburgh  
301 Alpha Drive  
RIDC Park  
Pittsburgh, PA 15238  
Tel: (412)963-7058

Laboratory Job ID: 180-135162-1

Client Project/Site: Available Cyanide 22030316

For:

Element Materials Technology  
328 Ley Rd  
Suite100  
Fort Wayne, Indiana 46825

Attn: Don Ellis



Authorized for release by:  
3/18/2022 3:27:58 PM

Andy Johnson, Manager of Project Management  
(615)301-5045

[Andy.Johnson@Eurofinset.com](mailto:Andy.Johnson@Eurofinset.com)

### LINKS

Review your project  
results through

**TotalAccess**

Have a Question?



Visit us at:

[www.eurofinsus.com/Env](http://www.eurofinsus.com/Env)

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

PA Lab ID: 02-00416



# Table of Contents

Cover Page . . . . .	1
Table of Contents . . . . .	2
Case Narrative . . . . .	3
Definitions/Glossary . . . . .	4
Certification Summary . . . . .	5
Sample Summary . . . . .	6
Method Summary . . . . .	7
Lab Chronicle . . . . .	8
Client Sample Results . . . . .	9
QC Sample Results . . . . .	10
QC Association Summary . . . . .	11
Chain of Custody . . . . .	12
Receipt Checklists . . . . .	13

# Case Narrative

Client: Element Materials Technology  
Project/Site: Available Cyanide 22030316

Job ID: 180-135162-1

**Job ID: 180-135162-1**

**Laboratory: Eurofins Pittsburgh**

## Narrative

### Job Narrative 180-135162-1

## Comments

No additional comments.

## Receipt

The sample was received on 3/15/2022 10:15 AM. Unless otherwise noted below, the sample arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 5.1° C.

## General Chemistry

Method OIA-1677: The following sample was diluted to bring the concentration of target analytes within the calibration range: 22030316-001A (180-135162-1). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

## Definitions/Glossary

Client: Element Materials Technology  
Project/Site: Available Cyanide 22030316

Job ID: 180-135162-1

### Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
□	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count



# Accreditation/Certification Summary

Client: Element Materials Technology  
Project/Site: Available Cyanide 22030316

Job ID: 180-135162-1

## Laboratory: Eurofins Pittsburgh

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Arkansas DEQ	State	19-033-0	06-27-22
California	State	2891	04-30-22
Connecticut	State	PH-0688	09-30-22
Florida	NELAP	E871008	06-30-22
Georgia	State	PA 02-00416	04-30-22
Illinois	NELAP	004375	06-30-22
Kansas	NELAP	E-10350	03-31-22
Kentucky (UST)	State	162013	04-30-22
Kentucky (WW)	State	KY98043	12-31-22
Louisiana	NELAP	04041	06-30-22
Maine	State	PA00164	03-06-24
Minnesota	NELAP	042-999-482	12-31-22
Nevada	State	PA00164	08-31-22
New Hampshire	NELAP	2030	04-05-22
New Jersey	NELAP	PA005	06-30-23
New York	NELAP	11182	04-02-22
North Carolina (WW/SW)	State	434	12-31-22
North Dakota	State	R-227	04-30-22
Oregon	NELAP	PA-2151	02-06-22 *
Pennsylvania	NELAP	02-00416	04-30-22
Rhode Island	State	LAO00362	12-31-21 *
South Carolina	State	89014	06-30-22
Texas	NELAP	T104704528	03-31-22
USDA	Federal	P-Soil-01	06-26-22
USDA	US Federal Programs	P330-16-00211	06-26-22
Utah	NELAP	PA001462019-8	05-31-22
Virginia	NELAP	10043	09-15-22
West Virginia DEP	State	142	01-31-23
Wisconsin	State	998027800	08-31-22

\* Accreditation/Certification renewal pending - accreditation/certification considered valid.

# Sample Summary

Client: Element Materials Technology  
Project/Site: Available Cyanide 22030316

Job ID: 180-135162-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
180-135162-1	22030316-001A	Water	03/07/22 08:50	03/15/22 10:15

1

2

3

4

5

6

7

8

9

10

11

12

13

## Method Summary

Client: Element Materials Technology  
Project/Site: Available Cyanide 22030316

Job ID: 180-135162-1

Method	Method Description	Protocol	Laboratory
OIA - 1677	Available Cyanide by Flow Injection, Lig	EPA	TAL PIT

### Protocol References:

EPA = US Environmental Protection Agency

### Laboratory References:

TAL PIT = Eurofins Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

# Lab Chronicle

Client: Element Materials Technology  
Project/Site: Available Cyanide 22030316

Job ID: 180-135162-1

Client Sample ID: 22030316-001A  
Date Collected: 03/07/22 08:50  
Date Received: 03/15/22 10:15

Lab Sample ID: 180-135162-1  
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	OIA - 1677		5			392060	03/17/22 12:23	SNR	TAL PIT
Instrument ID: ALPKEM3										

**Laboratory References:**  
TAL PIT = Eurofins Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

**Analyst References:**  
Lab: TAL PIT  
Batch Type: Analysis  
SNR = Sabra Richart

# Client Sample Results

Client: Element Materials Technology  
Project/Site: Available Cyanide 22030316

Job ID: 180-135162-1

**Client Sample ID: 22030316-001A**

**Lab Sample ID: 180-135162-1**

**Date Collected: 03/07/22 08:50**

**Matrix: Water**

**Date Received: 03/15/22 10:15**

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Available	0.26		0.010	0.0078	mg/L			03/17/22 12:23	5

# QC Sample Results

Client: Element Materials Technology  
Project/Site: Available Cyanide 22030316

Job ID: 180-135162-1

## Method: OIA - 1677 - Available Cyanide by Flow Injection, Lig

Lab Sample ID: MB 180-392060/22

Matrix: Water

Analysis Batch: 392060

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Available	ND		0.0020	0.0016	mg/L			03/17/22 12:11	1

Lab Sample ID: LCS 180-392060/23

Matrix: Water

Analysis Batch: 392060

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Available	0.0501	0.0469		mg/L		94	82 - 132

## QC Association Summary

Client: Element Materials Technology  
Project/Site: Available Cyanide 22030316

Job ID: 180-135162-1

### General Chemistry

#### Analysis Batch: 392060

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-135162-1	22030316-001A	Total/NA	Water	OIA - 1677	
MB 180-392060/22	Method Blank	Total/NA	Water	OIA - 1677	
LCS 180-392060/23	Lab Control Sample	Total/NA	Water	OIA - 1677	



## CHAIN OF CUSTODY RECORD

Omega COCID 140177

PAGE: 1

OF: 1

## ADDRESS

Element Materials Technology - Fort  
Wayne  
328 Ley Rd.  
Fort Wayne, IN 46825  
TEL: (260) 424-1622  
FAX: (260) 424-9124  
Website: www.element.com

**Test America-Pittsburgh**  
**Sample Receiving**  
**301 Alpha Dr.**  
**Pittsburgh, PA 15238**  
**800-765-0980**

## SPECIAL INSTRUCTIONS / COMMENTS:

PO#  
PIFW001400

ITEM #	SAMPLE ID	CLIENT SAMPLE ID	BOTTLE TYPE	MATRIX	DATE COLLECTED	NUMBER OF CONTAINERS	COMMENTS: Methanol Preserved Weights HOT Sample Notation, Additional Sample Description.
1	22030316-001A CYAN_1677	S-901 Grab	500HDPENAOH	Wastewater	3/7/2022 8:50:00 AM	1	



180-135162 Chain of Custody

Relinquished By: <i>[Signature]</i>	Date: 3-14-22	Time: 1700	Received By: <i>[Signature]</i>	Date: 3-15-22	Time: 1015	REPORT TRANSMITTAL DESIRED: <input type="checkbox"/> HARDCOPY (extra cost) <input type="checkbox"/> FAX <input type="checkbox"/> EMAIL <input type="checkbox"/> ONLINE
Relinquished By:	Date:	Time:	Received By:	Date:	Time:	FOR LAB USE ONLY
Relinquished By:	Date:	Time:	Received By:	Date:	Time:	Temp of samples _____ °C Attempt to Cool? _____
TAT: Standard <input type="checkbox"/> RUSH Next BD <input type="checkbox"/> 2nd BD <input type="checkbox"/> 3rd BD <input type="checkbox"/> Note: RUSH requests will incur surcharges!						Comments: _____
Page 16 of 18						



## Login Sample Receipt Checklist

Client: Element Materials Technology

Job Number: 180-135162-1

**Login Number: 135162**

**List Number: 1**

**Creator: Watson, Debbie**

**List Source: Eurofins Pittsburgh**

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



# Chain of Custody

03/18  
m3/18 w3/18

Laboratory  
Number: 22030316

<b>Client Information:</b>		<b>Billing Information:</b>		<b>PO Number:</b>		<b>Project Name/Number:</b>		<b>Page</b>	
Company Name: East Chicago Sanitary District		Same				S-901		18 of 18	
Contact Name: Henry Padilla				Quote Number:		Sampler's Signature		Matrix Code	
Address: 5201 Indianapolis Blvd				Required QC Level		Shipping Method:		DW = Drinking Water WW = Waste Water GW = Ground Water AQ = Aqueous OT = Other SL = Sludge O = Oil F = Food NG = Natural Gas NGL = Natural Gas Liquid PW = Produced Water CF = Completion Fluid	
City, State Zip: East Chicago IN 46312		Ext. 240		Bill Monthly		UPS / FedEx Element / Hand / Mail			
Phone Number: 219-391-8466		Ext. 240		Yes <input type="checkbox"/> No <input type="checkbox"/>					
Fax Number:									
E-mail Address: hpadilla@eastchicago.com									

Sample ID/Description	Turn Time		Collection Information	Container	Pres.	Requested Tests				Comments									
	Date	Time				Grab / Composite	Matrix	Quantity	Type		HCl, HNO <sub>3</sub> , H <sub>2</sub> SO <sub>4</sub> , NaOH, Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>	CYANIDE 1677	Oil & Grease T	**SVOC list	*Metals	NH <sub>3</sub> , T.PHOS, COD	PHENOL	300: FI	TSS
S-901 Grab	3-7-22	8:58	Grab	WW	1	P	NAOH	X											
S-901 Grab			Grab	WW	1	G	H2SO4		X										
S-901 Grab			Grab	WW	1	G	NONE			X									
S-901 Composite			Comp	WW	1	P	HNO3				X								
S-901 Composite			Comp	WW	1	P	H2SO4					X							
S-901 Grab			Grab	WW	1	G	H2SO4							X					
S-901 Composite			Comp	WW	2	P	NONE									X		X	

Relinquished by	Date/Time	Received by	Date/Time	Composite Sampler
1	3-8-22 10:20	Henry Padilla	3-8-22 10:20	Start Date/Time: 3-7-22 8:58 End Date/Time: 3-8-22 8:29
2	3-8-22 14:35	Henry Padilla	3-8-22 14:35	Received at lab on ice? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Temp: 2.1°C
3				

All samples submitted to Element Materials Technology for analysis are accepted on a custodial basis only. Ownership of the material remains with the client submitting the samples. Element Materials Technology reserves the right to return unused sample portions.

8800 North US 31  
Columbus, IN 47201 USA  
P 812-375-0531 F 812-375-0731

328 Ley Road, Suite 100  
Fort Wayne, IN 46825 USA  
P 260-471-7000 F 260-471-7777

909 Executive Dr.  
Warsaw, IN 46580 USA  
P 574-267-3305 F 574-269-6569

3371 Cleveland Road, Suite 100A  
South Bend, IN 46628-9780 USA  
P 574-277-0707

2417 W. Pinhook Rd  
Lafayette, LA 70508-3344 USA  
P 337-235-0483 F 337-233-6540